

# Alarms at Chemical Agent Disposal Facilities and Chemical Weapons Storage Sites

Alarms are a normal part of disposing of chemical weapons. Just as people use alarm clocks and timers to stay organized, the disposal facilities use sensors and alarms on thousands of pieces of equipment to keep the process safe. These alarms and sensors are on items such as doors, switches, valves, conveyor systems, automated equipment, furnaces, and storage and chemical treatment tanks; they measure temperature, position, pressure, flow rates, fill levels, levels of oxygen, nitrogen, carbon monoxide and other gases, as well as detecting the presence of chemical agent.

The computers used to control operations at disposal facilities record several thousand alarms daily as part of normal processing, including alarms that are generated as a regular part of the daily testing of the agent monitors. Most of these alarms are as routine as your alarm clock going off in the morning to wake you up, your PDA beeping to alert you to a meeting or the light on your phone flashing to alert you to voice mail.

## Types of alarms at a disposal facility

There are three general types of alarms:

- **Information and Notification Alarms** tell the workers of the status of a piece of equipment such as a switch, door, furnace, tank—open, closed, 1,500 degrees Fahrenheit, half full, etc. They also confirm that a process action is complete or ready to start, similar to an oven timer that dings or buzzes when the cookies are ready to come out. Alarms also sound when process and chemical agent monitors are tested to ensure they work properly, just like the alarm going off when testing a home smoke detector.
- **Trend Alarms** show that, while the process is still safe, a pattern or trend is emerging that could eventually take the process outside of safe limits. These alarms alert the operator to take action before the process exceeds acceptable, safe limits.
- **Out-of-limits Alarms** provide notification of immediate problems with equipment or the process. Depending

on the portion of the process or piece of equipment causing the alarm, the disposal process could automatically be stopped.



## Normal alarms for storage or disposal operations

The notification and information alarms, as well as the monitor testing alarms, are normal for disposal operations.

Testing of the chemical agent monitors used in the storage area also produces alarms. Also, depending upon the storage site, alarms resulting from chemical agent leaks inside the storage facilities may happen hundreds of times a year.

## Chemical agent alarms

Sometimes during the disposal process or maintenance work, the chemical agent monitors detect agent in various parts of the disposal facility. Some areas of the facility are expected to have agent present. These areas are designed and built to control and contain agent. Still, these areas are monitored to determine the level of agent contamination so workers in those areas are dressed in appropriate protective gear. If agent is detected in an area that is normally agent free, the monitors alarm.

The chemical agent monitors are very sensitive; they always detect agent if it is present but they also can alarm for other things such as diesel fumes and perfume. The monitors are tested at least daily to ensure they work properly and to reduce the number of false alarms. Sometimes the only way to determine whether a

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contact the  
Public Outreach and  
Information Office of the  
Chemical Materials  
Agency (Provisional)  
1(800) 488-0648 or  
[www.cma.army.mil](http://www.cma.army.mil)

## Alarms at Chemical Agent Disposal Facilities and Chemical Weapons Storage Sites (continued)

monitor has detected chemical agent or another compound is to perform a detailed laboratory analysis on air samples drawn by back-up monitors. It is important to note that any agent alarm is treated initially as real until final determination of the presence of agent is made.

### Notification of the public, local officials or media of alarms at a storage site or disposal facility

- All alarms for chemical agent in the outside air are reported to the county emergency operations centers and to the appropriate local, state and federal agencies.
- Any alarms that automatically stop agent disposal operations or result from exceeding a permit requirement are reported to the appropriate county, state and federal agencies.
- Media are notified in the event of confirmed alarms for agent in outside air and generally for events that result in a pause in the disposal process.
- Except for testing, the emergency alert sirens will be activated only to notify the public in the unlikely event of a chemical agent incident at a storage area or disposal facility that could pose a threat to the surrounding community.

### Emergency alert siren response

The counties around each disposal site have established appropriate emergency alert siren response guidelines. To learn how to respond in



an emergency, contact your county emergency management agency. In the unlikely event that the emergency sirens are activated, knowing what to do is your best protection. Your local outreach office can assist you in contacting the appropriate county personnel.

It is important to keep in mind that alarms are a normal part of the chemical weapons disposal process. Just like alarms that help you accomplish the everyday tasks in your life, alarms at the chemical weapons disposal facilities help the workers ensure that disposal operations are accomplished safely and efficiently.